NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

TOXIC SALT REDUCTION

(acre)
CODE 610

DEFINITION

Reducing or redistributing the harmful concentrations of salt and/or sodium in a soil (sometimes referred to as leaching).

PURPOSE

To permit desirable plants to grow.

CONDITIONS WHERE PRACTICE APPLIES

On land where the accumulation of salt is at or near the surface limits the growth of desirable plants.

CRITERIA

The soil must be capable of supporting the planned vegetation economically.

Corrective measures must comply with water quality laws and regulation. Monitoring of before and after conditions is required.

CONSIDERATIONS

Effects on the water budget, especially on infiltration, deep percolation, and ground water recharge. Consider the variability (volume and timing) of the leaching fraction, the need for additional irrigation water, and the impact of drainage if installed as an associated practice.

Effects on irrigation induced erosion, sedimentation, and soluble and sediment-attached substances in irrigation tail water.

Effects of leaching on the volume of toxic salts and soluble nutrients and pesticides removed from the root zone. Identify the ultimate residence of the chemicals and the surface and ground water impact of drainage if installed as an associated practice.

PLANS AND SPECIFICATIONS

Plans and specifications for managing soil salinity and sodicity must evaluate the area in question in a methodical fashion to include the following:

- Map of the affected area.
- Test the soil water extract of the soil surface and potential root zone to determine the presence and concentration of saline or sodic substances. Refer to National Engineering Handbook, Part 652, Chapter 3, Crops, for guidance on how salinity and sodicity levels affect plant growth.
- Determine the relationship of the ground surface topography and the water table contours in and adjacent to the problem area. One suggested method involves installing nine (three rows of three) auger hole observation wells for water table measurements. Additional wells may be needed to adequately define the recharge area.
- Correct the salinity problem by applying the practice(s) as part of an overall resource management system (RMS).

Specifications should include the following:

- A list of plants adapted for use in recharge and affected area. Consider factors such as water usage, salt tolerance, and erosion control characteristics.
- A list of conservation practices that constitute components of the treatment of recharge and affected areas.
- A list of the types and extent of environmental and ecological monitoring and evaluation that may be necessary.
- A monitoring plan to evaluate the effects of practices applied.

OPERATION AND MAINTENANCE

Provisions shall be made, as necessary, for operations and maintenance requirements and may include a formal plan commensurate with the size and complexity of the application.

Installed practices will be inspected periodically to ensure proper function.